

# Governance and Finance for Sustainable Energy and Water Resources Management

Sustainable development embraces the concept of meeting the needs of the present without compromising the ability of future generations to meet their own needs. The United Nations Conference on Environment and Development, or Earth Summit, held in Rio de Janeiro, Brazil, in 1992, addressed global environmental issues. A product of the Earth Summit was Agenda 21 — a comprehensive set of guidelines for achieving sustainability that was adopted by 172 nations at the conference. Since then, nations have been striving to incorporate principles of sustainable development (economics, environment, and societal equity) into new development projects, including energy and water projects.

Official development assistance (ODA) often plays a vital catalytic role in achieving development goals. However, in the past decade, ODA to developing countries has decreased, despite the fact that energy and water infrastructure needs in developing countries have increased. More than US\$1.5 trillion is needed each year to meet global energy demand. On March 14, 2002, President George W. Bush announced that the United States will dramatically increase its core assistance to developing countries by 50% over the next three years, resulting in a US\$5 billion annual increase over current levels by fiscal year 2006.<sup>1</sup> This increased funding will go into the new supplemental “Millennium Challenge Account,” or MCA. In announcing the MCA, the President stressed that this new money is *in addition* to the more than US\$10.8 billion per year the United States currently devotes to ODA. “The goal is to provide people in developing nations the tools they need to seize the opportunities of the global economy. In return for this additional commitment, we expect nations to adopt the reforms and policies that make development effective and lasting,” the President said.

ODA alone cannot meet the growing need for investment in the energy and water infrastructure of the developing world. Private-sector funds must help bridge this gap. However, without sound and predictable “good governance” principles in place, private funding is difficult to attract. Experience shows that private-sector funds flow to areas that have established economic, political, and legal foundations amenable to development. Such foundations, or prin-

ciples, include, among other things, policies that allow for capacity building, informed decision making, standard commercial practices, institution building, competitive environments, consistent and enforced regulations, and public participation in decision making.

## ENERGY SECTOR

### Fostering Governance in the Energy Sector

Economic growth and social development in developing countries are hindered by a lack of adequate, efficient supplies of quality modern energy. The energy sector in many developing countries is dominated by state-owned monopolies that are often not operated along commercial lines; they are commonly characterized by relatively low levels of efficiency and frequently undermined by corruption. The result is underperformance, which translates into high costs in terms of both overall cost levels and detailed cost structures. The high costs often lead to the adoption of untargeted, damaging, and distorting subsidies. This problem results in considerable economic waste and fiscal burdens at the macroeconomic level in many developing countries, and it also inhibits the provision of energy to other sectors that require supplies of quality modern energy at the microeconomic level.

The ability to create a business environment that will attract the investments necessary to provide adequate, efficient supplies of quality modern energy is constrained by problems that can be characterized as follows:

- Inefficient energy-sector institutions,
- Inappropriate energy-sector policies,
- Intermittent application of the rule of law,
- Immature markets for energy and environmental services,
- Weak local capital markets,
- Poor performance by business management in energy institutions,
- Lack of adoption of best practices and standards by energy institutions and the public sector,
- Lack of consumer knowledge about legal and commercial requirements for sustainable energy services, and

<sup>1</sup> “President Proposes \$5 Billion Plan to Help Developing Nations,” remarks by President Bush on global development, Inter-American Development Bank, Washington, D.C., March 2002.

- Lack of roles for civil society in formulating public policies for energy services.

Good governance, by addressing inadequacies in the administration of the energy sector by public and private sector institutions, can resolve these constraints. Generally, governance involves how decisions are made, implemented, and enforced within a sector as well as how disputes are resolved. Good governance embodies transparency, accountability, efficiency, and the rule of law. It leads to relatively low levels of corruption; consistent, cost-effective levels of service provision; and responsiveness to changing conditions and public needs.

Energy-sector governance is the institutional scaffolding (i.e., transparent, predictable, and enforceable political, social, and economic rules) of public administration that enables transactions for energy products and services to be economically sustainable. Governance (both public policy and corporate governance) is a means to achieve the economic and financially viable provision of services by the energy sector. There is a growing international acceptance of several basic principles that can promote sustainable development by all countries, anywhere in the world. These include:

- Effective and democratic institutions that include an independent and fair judiciary;
- Sound monetary, fiscal, and trade policies that promote economic growth and encourage social development and environmental protection;
- Participatory roles for all members of civil society; and
- Sound policies informed by science and the scientific method.

A well-governed energy sector is characterized by utilities that operate under standard commercial practices. Commercialization refers to the wide range of activities necessary to bring a generation, transmission, or distribution company in line with commercial standards. These activities include, but are not limited to, forming a management team that is independent from the government; hiring or developing a staff with the appropriate skills for the job; releasing redundant staff; improving cost recovery; setting up metering systems; installing management information systems; and keeping financial records in line with international accounting standards.

With respect to the energy sector, reforms are the embodiment of improved governance. The reasons for implementing energy-sector reforms depend on the conditions of the particular country seeking the reforms. In developed countries, the main goal is to reduce end-user tariffs through increased efficiency within the sector. In contrast, in most developing countries unable to finance an energy supply infrastructure with state funds, the goal is to privatize state-controlled monopolies in order to attract sufficient private investment to upgrade and expand the inadequate infrastructure.

Experience has shown that energy-sector reform usually starts from a shared vision of the core objectives. These objectives typically include a reliable, affordable energy supply; commercially viable enterprises; tariffs that reflect costs; private-sector investment; maximized competition and deregulation; and an overall structure that meets international standards, best practices, and legitimate investor expectations. The benefits include improved service and quality for customers; more efficient use of scarce resources; technology transfers; foreign direct investment; increased trust in government institutions; macroeconomic growth; environmental improvement; and, most importantly, better living standards for people.

Energy-sector reform encompasses a number of elements, but these elements have common objectives: to increase access by users, increase the efficiency of energy services, decrease the cost of energy services, and introduce competition into the sector wherever feasible. The elements of energy-sector reform are generally implemented through a sequence of steps designed to achieve full private-sector involvement and competitive markets. First state-owned utilities are commercialized and corporatized. Then enabling legislation is passed, allowing the introduction of private ownership into the sector. Next, as private energy companies become interested in investing, a host state establishes the regulatory framework to supervise a competitive, privatized sector. Then the actual transfer of utilities into private ownership occurs, which requires the unbundling of existing power generation, transmission, distribution, and supply activities into separate activities. Finally, once unbundling of state-owned utilities has occurred, the resulting separated entities are partially or wholly privatized.

Implementation of successful energy-sector restruc-

turing typically follows three basic stages: (1) comprehensive legal and regulatory reforms, (2) commercialization and development of the existing dominant utilities, and (3) domestic and/or international private-sector investment and privatization. The linchpin for this vision is a comprehensive energy law that meets key global norms and standards. The law should define the basic structure of the sector; establish basic policies and priorities; separate the functions of policy making, ownership, and regulation; establish an independent regulator; and create a framework for private investment and ultimate privatization.

Therefore, the major aspects of energy-sector reform can be consolidated as follows:

- *Promulgation of legislation that allows unbundling and/or privatization of existing assets:* The establishment of a reordered regulatory framework and the introduction of competitive markets and commercial practices into the energy sector are preliminary steps toward privatization of existing assets.
- *Promulgation of legislation that allows private investment in the industry:* Enabling legislation is required to permit transfer of existing assets and concessions into private hands. Public access to the privatization process and information about privatization helps develop community acceptance of this step in energy-sector reform.
- *Establishment of an independent regulatory authority:* Institution building is a central aspect of energy-sector reform. Privatization of assets and competitive markets require a reordering of the regulatory framework to supervise the restructured energy sector. Critical aspects include the separation of the regulator from both the energy policy arm of government and state-owned power providers; the financial autonomy and independence of the regulator; the adequacy of the regulator's inspection and supervisory authority; and the ability of the regulator to address anticompetitive circumstances.
- *Corporatization and commercialization of existing utilities:* A considerable amount of data from many countries demonstrates that development benefits accrue when utilities are separated from other government functions and when utilities are exposed to the best commercial practices.
- *Privatization of existing assets:* The final stage in sector reforms is the implementation of privatization. A critical

issue to consider is whether the process of privatizing existing utilities is transparent and open to foreign investors, thereby enhancing both public participation and capacity building.

### **The Energy Governance-Finance Connection**

The growth of the energy sector that is required to meet human needs hinges on attracting investment. Both debt and equity are drawn to safe havens where funds are likely to grow and provide a return on investment. Legal, regulatory, and policy regimes that ensure a stable environment (i.e., transparent and predictable political, social, and economic market rules) characterize locations in which investments can flourish. Governance actions designed to mobilize investment in the energy sector include these:

- Promoting transparency in the formulation, promulgation, and implementation of rules, regulations, and technical standards;
- Establishing nondiscriminatory third-party access to and interconnection with energy networks and grids;
- Establishing independent regulatory authorities separate from and not accountable to any supplier of energy services;
- Establishing nondiscriminatory, objective, and timely procedures for the transportation and transmission of energy;
- Requiring parties to undertake measures designed to prevent certain anticompetitive practices from occurring in energy sectors (e.g., engaging in anticompetitive cross-subsidization or using information obtained from competitors that could lead to anticompetitive results); and
- Increasing the public's understanding of the market approach to providing energy services and its knowledge of ways in which it could effectively participate in this approach.

## **WATER SECTOR**

### **Fostering Governance in the Water Sector**

Good governance is recognized internationally as a critical centerpiece of effective, sustainable, and integrated water management. Water managers and users alike acknowledge the need for transparent, accountable, and participatory governance to build a consensus on priority needs today and to respond to an ever-changing context in the future. Beyond immediate benefits, effective water

resource governance also offers numerous opportunities to foster the more generalized building of civil society and a culture of democratic governance in many countries.

There is no universal model for water governance appropriate for all contexts. There is, however, a growing international acceptance of several basic principles that are shared by all “good water governance” participants anywhere in the world. The following aspects are involved:

- Integrated, intersectoral, and multi-objective decision making about water resources at the basin scale, in which the relationships between groundwater and surface water; weather, climate, and hydrologic resources; water quantity and quality; land and water; and freshwater and marine systems are recognized and in which the central importance of the ecological services provided by hydrologic systems is acknowledged;
- Informed and science-based decision making, in which the public has adequate access to water resources information for an improved understanding of the water cycle;
- Broad participation and empowerment of stakeholders in water resources decision making, across sectors and social/cultural groups and especially including women;
- Strong, effective, and culturally appropriate institutional, policy, and legal frameworks (including setting standards and regulations) that reinforce integrated, accountable, participatory, and sustainable management and that minimize corruption;
- Effective coordination among sectors, between public and private participants, and across multiple geographic and institutional scales;
- Emphasis on decision making and assignment of authority at the lowest appropriate level; and
- Commitment to creating and strengthening the human and organizational capacity for sustainable and integrated water management, in both the public and private sectors.

### **Mobilizing Financial Resources to Manage Water Resources**

Mobilizing the financial resources necessary to manage water resources is often the first and major challenge facing managers and governments around the world. The responsibility for financing the water resource infrastructure and other needs often rests with the local or national govern-

ment, although investment from private and other external sources is also frequently required.

The greatest investment gap exists in the developing world, where the current annual investment of US\$75 billion pales in the face of the total water resource needs in all sectors, estimated to be as much as US\$180 billion per year. Financing to address water investment needs in developing countries is currently drawn from a mix of sources, including these:

- Domestic public-sector financing at the national or local level (from taxes, user fees, public debt, etc.) [64% of total expenditures];
- Direct investments from domestic private sources [19% of total expenditures];
- Direct investments from international private sources [5% of total expenditures]; and
- International sources of support and cooperation (including multilateral and bilateral ODA) [12% of total expenditures].

Each of these sources has, and will continue to have, an important and distinct role to play in ensuring a sustainable and secure water future for the world. These totals tell only part of the story, since different water use sectors (e.g., agriculture, urban and rural water supply and sanitation, industry, energy, and environmental services) require unique combinations of funding that can depend more heavily on some of these sources than on others. In all sectors, however, it is clear that the majority of future investments must increasingly come from an appropriate balance of self-regenerating domestic public sources of capital as well as domestic and international private sources.

### **The Water Governance-Finance Connection**

The themes of governance and financing for water resources management intersect at many levels. Good governance is a central precondition for the successful generation of the financial and human resources necessary for the sustainable development and management of water resources. Unfortunately, some of the countries that are most in need of additional resources lack the governance conditions that will either attract new sources of financing or ensure that public and private resources are managed in an equitable or sustainable way.

Sound governance practices create “enabling environments” that encourage good both public- and private-sector investment. Beyond providing general support to achieve good governance conditions, specific attention should be directed to efforts that reduce risk and facilitate healthy capital markets, especially domestically. Some additional guidelines on using good governance to mobilize financial resources include these:

- Water should be recognized as an economic, social, and environmental good; the full costs of water management and water services should be acknowledged; and the costs should be allocated transparently, equitably, and sufficiently throughout society (through tariffs, subsidies, taxes, etc.).
- Conditions and mechanisms of access to capital should be available at all levels (e.g., microcredit, revolving loan programs, local bond issues).
- Stable systems that provide access to water and allocate water should be available (e.g., water rights frameworks, formal and informal water markets, common property management).
- Accountable and transparent systems, the full accounting of costs and benefits, a progressive policy and legal environment, and a constructive relationship between civil society and government should be promoted to

ensure that flows of resources from all sources are generated and allocated in a way that protects the public interest, considers the needs of the full spectrum of social participants, and adequately protects ecosystems.

The responsibility for forging better water governance throughout the world, including creating the enabling environment necessary for sustainable financing, is ultimately the responsibility of local participants. However, these processes are unlikely to take hold in many places unless there are increasingly coordinated partnerships among external donors, domestic public bodies, the private sector, and civil society. In this mix, ODA serves an essential catalytic role. Targeted and strategic expenditures of development assistance funds can help advance the sustainable management of water resources through good governance. Such assistance can include supporting basin-level management structures, fostering appropriate technologies and nonstructural measures to reduce consumption and improve quality, and strengthening enabling conditions to mobilize financial resources. Such support is most effective when it is applied to local strategies that encourage innovative processes and approaches, broaden the menu of tools and options available, leverage internal and external support and investments, and build capacity in civil society and the public and private sectors.

